



Beef Producers' Perceptions About the Value of Testing for Persistent Infection with Bovine Viral Diarrhea Virus in Calves

The U.S. Department of Agriculture's National Animal Health Monitoring System (NAHMS) conducted the Beef 2007–08 study, which focused on beef cow-calf health and management practices in 24 States divided into three regions. These major beef cow-calf producing States represented 79.6 percent of U.S. operations with beef cows and 87.8 percent of U.S. beef cows.

Goals for the Beef 2007–08 study included taking an in-depth look at management practices used for calves persistently infected with bovine viral diarrhea virus (BVDV) and estimating the prevalence of calves persistently infected with BVDV on U.S. beef cow-calf operations.

Infection with BVDV can affect an animal's reproductive efficiency and cause a variety of conditions, including respiratory and digestive disease.

Ultimately, bovine fetuses are the source of persistent infection with BVDV in cattle. Fetuses exposed to the virus between 40 and 120 days of gestation can become immunotolerant to BVDV and shed the virus their entire lives. These persistently infected animals can pass the virus to noninfected cattle, which develop clinical disease. If these newly-infected animals are pregnant, they can pass the infection to their calves (if the exposure occurs at the right stage of gestation) thereby creating the next generation of persistently infected calves. Infection with BVDV results in other effects at other stages of gestation. Vaccination can increase resistance to BVDV infection and thus lower the frequency of persistently infected calves. However, vaccination is not always effective in eliminating the risk of persistently infected calves. Herd BVDV control plans include surveillance, biosecurity, and biocontainment strategies to prevent, reduce, or eliminate BVDV. Appropriate testing, targeted vaccination, and management are integral parts of these plans.

* States/Regions

West: California, Colorado, Idaho, Montana, New Mexico, Oregon, Wyoming

Central: Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota

Southeast: Oklahoma, Texas, Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Tennessee, Virginia

During the Beef 2007–08 study, data were collected on beef producers' perceptions about the value of testing their calf crop for persistent infection with BVDV. Producers were given a scenario in which a group of calves is tested for persistent infection with BVDV and any positive animals are removed. They were then asked whether or not the value (positive or negative) of the remaining calves would change. Further, if there was a perception of changed value for the remaining calves, producers were asked about the degree of the expected change in value.

Results

The highest percentage of operations (46.6 percent) did not know if the value of the remaining calves would change (table 1). Very few operations (2.6 percent) believed that the value of the remaining calves would decrease. Approximately equal percentages of operations believed that the calves' value would increase, or would not be affected, or would be affected but by an unknown amount.

Table 1. Percentage of Operations by How, According to Producers, Removing Calves that Test Positive for Persistent Infection with BVDV Affects the Value of Calves Remaining in the Herd, and by Herd Size

Effect on Value of Remaining Calves	Percent Operations				
	Herd Size (Number of Beef Cows)				
	1-49	50-99	100-199	200 or More	All Operations
	Pct.	Pct.	Pct.	Pct.	Pct.
Increases value	14.2	16.0	15.7	27.6	15.3
Decreases value	3.3	1.8	0.0	0.8	2.6
Has no effect	18.7	20.1	23.7	13.8	19.1
Do not know	48.8	46.6	37.3	32.6	46.6
Affects value, but amount unknown	15.0	15.5	23.3	25.2	16.4
Total	100.0	100.0	100.0	100.0	100.0

A higher percentage of operations in the West region (29.3 percent) believed that testing for persistent infection with BVDV and removing infected animals increased the value of the remaining calves compared with operations in the Central and Southeast regions (18.9 and 12.0 percent, respectively) (table 2).

More information about BVDV can be found at the following Web sites:

www.bvdinfo.org
www.avc-beef.org
www.aabp.org

Table 2. Percentage of Operations by How, According to Producers, Removing Calves that Test Positive for Persistent Infection with BVDV Affects the Value of Calves Remaining in the Herd, and by Region

Effect on Value of Remaining Calves	Percent Operations		
	Region		
	West	Central	Southeast
	Pct.	Pct.	Pct.
Increases value	29.3	18.9	12.0
Decreases value	0.4	0.0	3.9
Has no effect	8.1	26.0	18.1
Do not know	47.1	39.8	49.0
Affects value, but amount unknown	15.1	15.3	17.0
Total	100.0	100.0	100.0

Among operations that believed removing persistently infected calves affects the value of remaining calves, the overall average expectation of change was an increase in value of \$22.70 per head. Most operations (57.2 percent) believed that removing persistently infected calves affects the health of the remaining calves in the group. Only 7.7 percent of producers believed that removal of persistently infected calves does not affect the health of the remaining calves.

Summary

Despite some auction-market data that suggest that groups of calves negative for persistent infection with BVDV bring higher prices, many operations (46.6 percent) are uncertain about the value of testing their calves for persistent infection with BVDV. More work is needed to document the economic effects of testing for and controlling persistent infection with BVDV on cow-calf operations. More data and continued education efforts addressing feasible control or elimination strategies may result in more widespread efforts to control BVDV in beef herds.

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